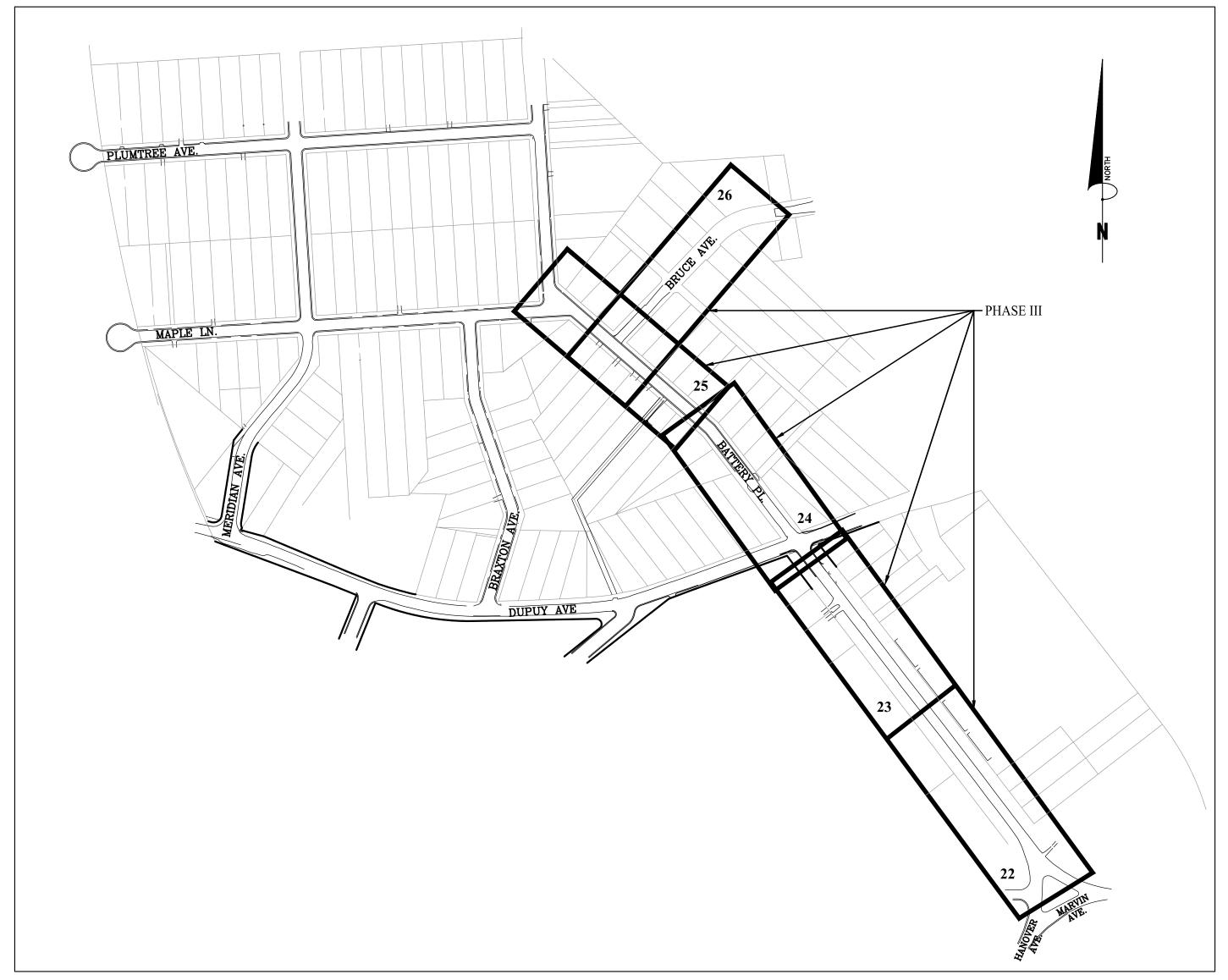
#### SITE DATA CONSULTANT: BOWMAN CONSULTING GROUP, LTD. 3951 WESTERRE PARKWAY, SUITE 150 RICHMOND, VIRGINIA 23233 CONTACT: JONATHAN JACKSON PHONE#: (804)-616-3240 FAX#: (804)-270-2008 EMAIL: jjackson@bowmancg.com TAX MAP #: ACREAGE: ACREAGE IN RIGHT OF WAY: \_\_\_\_\_ ACREAGE IN PAVED AREA: TOTAL ACREAGE: ZONING: USE: **ROADWAY & UTILITIES UTILITIES**: CITY WATER CABLE 🛛 **POWER** FLOOD PLAIN INFORMATION: FEMA FLOOD PLAIN YES □ NO ☒ FLOOD ZONE:\_ FIRM MAP #: TOPOGRAPHICAL INFORMATION: SURVEYED BY: BOWMAN CONSULTING GROUP DATE OF SURVEY: MAY 13, 2014 WETLAND INFORMATION: WETLANDS LOCATED ONSITE? YES □ NO ☒ ACREAGE OF IMPACTS: \_\_\_\_\_0 RESOURCE AREAS: RPA: YES □ NO ☒ RMA: YES □ NO ☒ CHESAPEAKE BAY PRESERVATION AREA:

COMPLIANCE HAS BEEN ACHIEVED BY: AVOIDANCE

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## CAPITAL IMPROVEMENT

# BRUCE AVENUE DRAINAGE IMPROVEMENTS COLONIAL HEIGHTS, VIRGINIA CITY #XXXX



SHEET LAYOUT
SCALE: 1" = 200 FT

SUBMITTAL DATE: MAY 13, 2015

FINAL BID SET



# SPENCER M. FRANCIS Lic. No. 043805

# CAPITAL IMPROVEMENT

DEPARTMENT OF PUBLIC WORKS

201 JAMES AVENUE COLONIAL HEIGHTS, VA. 23834
CONTACT: TODD FLIPPEN
PHONE: (804) 520-3224
FAX: (804) 520-9237
EMAIL: flippent@colonialheightsva.gov
WEB: www.colonialheightsva.gov

DIRECTOR OF PUBLIC WORKS / CITY ENGINEER

WILLIAM (CHUCK) E. HENLEY, P.E.

#### APPROVED FOR CONSTRUCTION

DIRECTOR OF PUBLIC WORKS / CITY ENGINEER DAT

RECOMMENDED FOR APPROVAL

ASSISTANT DIRECTOR OF PUBLIC WORKS DATE

MAINTENANCE AND OPERATIONS DA

APPROVAL STAMP

Bowman Consulting Group, Ltd. 3951 Westerre Parkway Suite 150 Richmond, Virginia 23233 Phone: (804) 616-3240 Fax: (804) 270-2008

Fax: (804) 270-2008

SUBMITTAL DATE
05/13/2015

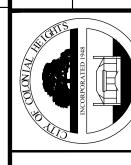
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 05/01/2015
 PROGRESS SET

 05/06/2015
 BID SET

 05/13/2015
 FINAL BID SET



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DATE RECEIVED STAMP

CALL BEFORE YOU DIG 811

MISS UTILITY OF

VIRGINIA

#### RESPONSIBLE LAND DISTURBER'S CERTIFICATION

IN ACCORDANCE WITH SEC. 10.1-563 AND 10.1-566 OF THE CODE OF THE STATE OF VIRGINIA, I HEREBY CERTIFY THAT I AM THE RESPONSIBLE LAND DISTURBER FOR THIS PROJECT AND THAT I HAVE A VALID CERTIFICATION FROM THE STATE OF VIRGINIA.

SIGNATURE

DATI

NAME (PRINT) / CERTIFICATION # CONTACT NUMBER

## ENGINEER'S CERTIFICATION

TO THE BEST OF MY KNOWLEDGE, THIS PLAN SATISFIES ALL ZONING CODE REQUIREMENTS, CONDITIONS OF APPROVAL, AND PROFFERS, LOT NUMBERS, BLOCK LETTERS / NUMBERS, ROAD NAMES, ETC.

SIGNATURE

SPENCER M. FRANCIS, P.E.

NAME (PRINT)

DATE

5/13/2015

REVISIONS

DATE DESCRIPTION

--- --- --- ---

SHEET NO.
1 OF 31

FEDERAL AID #:

N/A

STATE UPC #:

PC #XXXXX

CITY PROJECT#:

SP #XXXXX

- ALL MATERIALS AND CONSTRUCTION WITHIN THE CITY RIGHT OF WAY SHALL BE CONSTRUCTED AND INSTALLED IN ACCORDANCE WITHE THE CITY OF COLONIAL HEIGHTS SPECIAL PROVISIONS, VIRGINIA DEPARTMENT OF TRANSPORTATION (VDOT) ROAD AND BRIDGE SPECIFICATIONS DATED 2007 AND MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES (MUTCD) DATED 2009 AND THE 2012 VIRGINIA SUPPLEMENT TO THE MUTCD (REVISION 1); THE VIRGINIA WORK AREA PROTECTION MANUAL DATED 2011 - REVISION 1; AND THE 2005 NATIONAL ELECTRIC CODE AND ANY SUBSEQUENT REVISIONS.
- A RIGHT OF WAY PERMIT MUST BE OBTAINED FROM THE DEPARTMENT OF PUBLIC WORKS PRIOR TO BEGINNING ANY CONSTRUCTION WITHIN THE EXISTING CITY MAINTAINED RIGHT OF WAY (INCLUDING
- A PRE-CONSTRUCTION MEETING IS REQUIRED PRIOR TO UNDERTAKING ANY CONSTRUCTION ACTIVITIES CONTRACTOR WILL CONTACT DEPARTMENT OF PUBLIC WORKS, IN WRITING, FIVE WORKING DAYS IN ADVANCE OF ANTICIPATED CONSTRUCTION START TO ESTABLISH DATE, TIME AND LOCATION FOR PRE-CONSTRUCTION MEETING. THE PRIMARY FUNCTION OF THE PRE-CONSTRUCTION MEETING WILL BE TO DISCUSS THE GENERAL SEOUENCE OF CONSTRUCTION. AS WELL AS IDENTIFY GEOTECHNICAL PARAMETERS OF PROPOSED CONSTRUCTION ACTIVITIES
- PRIOR TO ANY CONSTRUCTION, THE CONTRACTOR SHALL CONSULT THE ENGINEER AND VERIFY THE
- APPROVAL OF THE PLANS BY ALL APPLICABLE FEDERAL, STATE AND LOCAL AGENCIES. DEPARTMENT OF PUBLIC WORKS IS TO RECEIVE WRITTEN NOTIFICATION 48 HOURS PRIOR TO
- COMMENCING INITIAL CONSTRUCTION ACTIVITIES.
- THE CONTRACTOR SHALL VERIFY THE ELEVATIONS OF ALL POINTS OF CONNECTION OR PROPOSED WORK TO EXISTING CURBS, SANITARY LINES, WATER LINES, ETC., PRIOR TO CONSTRUCTION.
- UPON DISCOVERY OF SOILS THAT ARE UNSUITABLE FOR FOUNDATIONS, SUB-GRADES, OR OTHER CONSTRUCTION PURPOSES, THE CONTRACTOR SHALL IMMEDIATELY CONTACT A GEOTECHNICAL ENGINEER AND THE DEPARTMENT OF PUBLIC WORKS. THESE AREAS SHALL BE EXCAVATED BELOW PLAN GRADE AS DIRECTED BY A GEOTECHNICAL ENGINEER, BACKFILLED WITH SUITABLE MATERIAL AND COMPACTED IN ACCORDANCE WITH CURRENT VDOT SPECIFICATIONS.
- ALL STORM SEWER DESIGN AND CONSTRUCTION TO BE IN ACCORDANCE WITH VDOT I & I LD-94 (D) 121.13. ALL DRAINAGE STRUCTURES SHALL BE IN ACCORDANCE WITH CURRENT VERSIONS OF LD-97 (D) 121. PIPE WITHIN THE RIGHT OF WAY AND EASEMENTS SHALL BE A MINIMUM CL-III OR GREATER IN ACCORDANCE WITH CURRENT VDOT STANDARDS AND SPECIFICATIONS.
- D. ALL PRE-CAST UNITS SHALL BE VDOT APPROVED. CERTIFICATION AND VDOT STAMP WILL BE REQUIRED ON ALL UNITS. SHOP DRAWINGS, GEOTECHNICAL DATA, SOIL BEARING CAPACITY, AND PLAN VIEW SHALL BE SUBMITTED AS A PACKAGE FOR THE DEPARTMENT OF PUBLIC WORKS FOR REVIEW AND APPROVAL
- 11. ALL CONCRETE SHALL BE MINIMUM CLASS A3-AE (AIR ENTRAINED 3,000 PSI). 12. ALL ENTRANCES ARE TO BE DESIGNED AND CONSTRUCTED IN ACCORDANCE WITH CURRENT CITY

STANDARDS. RESIDENTIAL LOT ACCESS SHALL BE PROVIDED PER THE FOLLOWING CRITERIA:

- ALL DRIVEWAY ENTRANCE CULVERTS ARE TO BE A MINIMUM OF 15" DIAMETER X 20' LONG PIPE AND SHALL CONFORM TO PE-1 PRIVATE ENTRANCE STANDARDS UNLESS OTHERWISE DIRECTED BY THE CITY ENGINEER. NO ENTRANCE CULVERTS ARE TO BE INSTALLED WITHIN FIVE (5) FEET OF A PROPERTY CORNER.
- VDOT STANDARD CG-9D ENTRANCES SHALL BE INSTALLED IN CURB AND GUTTER NEIGHBORHOODS

#### INSPECTIONS TO BE PERFORMED BY THE DEPARTMENT OF PUBLIC WORKS SHALL BE REQUESTED IN WRITING, 48 HOURS PRIOR TO ENTRANCE INSTALLATION.

- DESIGN CHANGES, SPECIFIED MATERIALS CHANGES AND/OR FIELD CHANGES FROM THE APPROVED PLANS NEED TO BE RE-SUBMITTED TO THE DEPARTMENT OF PUBLIC WORKS PRIOR TO PROCEEDING WITH THE WORK. A LETTER OF EXPLANATION SHALL ACCOMPANY THE REVISED PLANS AND/OR DRAINAGE CALCULATIONS, WHICH MUST BE SUBMITTED, TO THE DEPARTMENT OF PUBLIC WORKS FOR REVIEW AND APPROVAL.
- CONTRACTOR SHALL VERIFY LOCATION AND ELEVATION OF ALL UNDERGROUND UTILITIES SHOWN ON PLANS IN AREAS OF CONSTRUCTION PRIOR TO STARTING WORK. CONTACT THE ENGINEER AND THE DEPARTMENT OF PUBLIC WORKS IMMEDIATELY IF LOCATION OR ELEVATION IS DIFFERENT FROM THAT SHOWN ON PLAN. IF THERE APPEARS TO BE A CONFLICT, AND/OR UPON DISCOVERY OF ANY UTILITY NOT SHOWN ON THIS PLAN, CALL MISS UTILITY OF CENTRAL VIRGINIA AT 1-800-552-7001 AND CONTACT CITY AND ENGINEER
- PAVED ROADSIDE DITCHES ARE TO BE SPECIFIED WHEN VELOCITIES EXCEED CURRENT VDOT DESIGN CRITERIA OR WHEN DITCH SLOPES ARE LESS THAN 0.75%. WHERE DITCH SLOPES EXCEED 5.0%. THE DEVELOPER MAY CHOOSE TO IMPLEMENT EROSION AND SEDIMENT CONTROL MEASURES IN AN ATTEMPT TO ACHIEVE CHANNEL STABILIZATION WHILE ACKNOWLEDGING THAT ADDITIONAL PAVED DITCH LININGS MAY BE REOUIRED PRIOR TO ACCEPTANCE OF THE ROADS INTO THE CITY'S ROAD SYSTEM. PAVED ROADSIDE DITCHES SHALL CONFORM TO VDOT-PG-2A STANDARDS AND SPECIFICATIONS.
- DEPARTMENT OF PUBLIC WORKS APPROVAL OF CONSTRUCTION PLANS DOES NOT PRECLUDE THE RIGHT TO REOUIRE ADDITIONAL FACILITIES AS DEEMED NECESSARY FOR ACCEPTANCE OF CITY'S FACILITIES. DEPARTMENT OF PUBLIC WORKS APPROVAL OF SITE PLANS WILL EXPIRE FIVE (5) YEARS FROM THE DATE
- OF THE INITIAL APPROVAL. THE DEPARTMENT OF PUBLIC WORKS APPROVAL OF SUBDIVISION PLANS WILL EXPIRE THREE (3) YEARS FROM THE DATE OF THE INITIAL APPROVAL.
- DEPARTMENT OF PUBLIC WORKS SHALL HAVE PERFORMED THE REQUIRED FIELD INSPECTION (PROOF ROLL) PRIOR TO PLACEMENT OF THE AGGREGATE BASE COURSE(S). CONTACT THE DEPARTMENT OF PUBLIC WORKS, IN WRITING, FOR SUBGRADE INSPECTION 48 HOURS PRIOR TO SCHEDULING PLACEMENT 6. PLANT MATERIALS SHALL HAVE ALL STRINGS OR ROPES AT THE BASE OF THE PLANT CUT AWAY FROM OF AGGREGATE BASE COURSE(S).
- 20. A PRIME COAT SEAL BETWEEN THE AGGREGATE BASE AND BITUMINOUS CONCRETE WILL BE REQUIRED AT A RATE OF 0.30 GALLONS PER SQUARE YARD (REC-250 PRIME COAT) PER VDOT STANDARDS AND SPECIFICATIONS. THE SCHEDULING OF AGGREGATE BASE INSTALLATION AND SUBSEQUENT PAVING ACTIVITIES SHALL ACCOMMODATE FORECAST WEATHER CONDITIONS PER SECTION 315 OF THE ROAD AND BRIDGE SPECIFICATIONS.
- . DEPARTMENT OF PUBLIC WORKS SHALL HAVE APPROVED ALL BASE COURSE(S) FOR DEPTH, TEMPLATE AND PERFORMED THE REQUIRED FIELD INSPECTION (VISUAL, PROOF ROLL, COMPACTION OR ANY ADDITIONAL AS DETERMINED BY THE DEPARTMENT OF PUBLIC WORKS INSPECTOR) PRIOR TO PLACEMENT OF ANY SURFACE COURSE(S). CONTACT THE DEPARTMENT OF PUBLIC WORKS, IN WRITING, FOR INSPECTION OF THE BASE COURSE(S) 48 HOURS PRIOR TO THE APPLICATION OF THE SURFACE COURSE(S)
- 22. A GEOTECH REPORT SHALL VERIFY/APPROVE STONE DEPTHS PRIOR TO ASPHALT PLACEMENT.
- 23. A LICENSED GEOTECHNICAL ENGINEER SHALL ASCERTAIN CAUSE AND CERTIFY RECOMMENDED METHOD OF REPAIR FOR ALL PAVEMENT STRUCTURAL FAILURES PRIOR TO CITY ACCEPTANCE.
- 24. ALL VEGETATION AND ORGANIC MATERIAL IS TO BE REMOVED FROM THE RIGHT OF WAY LIMITS PRIOR TO CONDITIONING OF THE SUBGRADE.
- 25. DRY GUTTER IS NOT ALLOWED IN CITY RIGHT OF WAY.
- 26. VIRGINIA DEPARTMENT OF TRANSPORTATION (VDOT) STANDARD UNDERDRAINS AND COMBINATION UNDERDRAINS SHALL BE INSTALLED AS REQUIRED TO PRECLUDE THE COLLECTION OF WATER UNDER THE PAVEMENT FOLLOWING COMPLETION OF CUT AND FILL WORK, THE OWNER'S SOIL CONSULTANT SHALL PREPARE AND SUBMIT A PLAN SHOWING ALL REQUIRED UNDERDRAINS AND /OR COMBINATION UNDERDRAINS TO THE DEPARTMENT OF PUBLIC WORKS FOR APPROVAL.
- . THE NECESSITY AND LOCATIONS FOR ADDITIONAL VDOT STANDARD UNDERDRAINS TO BE DETERMINED AT TIME OF SUBGRADE INSPECTION.
- 28. APPROVAL OF A DETAILED CONSTRUCTION SEQUENCING/MAINTENANCE OF TRAFFIC NARRATIVE FOR THE WORK ZONE IS A PREREQUISITE FOR ISSUANCE OF A RIGHT OF WAY PERMIT ALLOWING ACCESS TO AND CONSTRUCTION WITHIN CITY MAINTAINED RIGHT OF WAY.
- 29. DEPARTMENT OF PUBLIC WORKS SHALL BE PROVIDED DOCUMENTATION BY A LICENSED GEOTECHNICAL ENGINEER CERTIFYING THAT ALL IN-PLACE PAVEMENTS MEET OR EXCEED THE APPROVED PAVEMENT DESIGN THICKNESS PRIOR TO CITY ACCEPTANCE. THE CERTIFYING DOCUMENTATION SHALL CONFORM TO VDOT SPECIFICATIONS AND THE APPROVED PLANS.
- 0. NO STRUCTURE SHALL BE CONSTRUCTED ON CITY MAINTAINED RIGHTS OF WAY UNLESS SAID STRUCTURES ARE SHOWN ON CONSTRUCTION PLANS APPROVED BY THE DEPARTMENT OF PUBLIC WORKS OR COVERED BY A CITY RIGHT OF WAY PERMIT
- . THE CONTRACTOR IS RESPONSIBLE FOR CONTACTING THE CITY TRAFFIC OPERATIONS SECTION AT (804)  $^{-8\cdot}$ 520-9371 FOR GUARDRAIL LOCATION AND PLACEMENT REQUIREMENTS. 2. ALL CONSTRUCTION DEBRIS, MATERIALS, DUMPSTERS, ETC., SHALL BE LOCATED OUTSIDE THE ROADWAY
- PRISM PRIOR TO ACCEPTANCE OF THE ROADS AND SHALL BE MAINTAINED OUTSIDE THE ROADWAY PRISM WITHIN EXISTING CITY ROADS. B. ANY LANDSCAPING, IDENTIFICATION SIGNS, LIGHTING, ETC. THAT MAY BE INDICATED WITHIN THE CONSTRUCTION PLANS SHALL BE FOR INFORMATION PURPOSES ONLY. NON-STANDARD ITEMS MUST BE
- APPROVED BY SEPARATE SUBMITTAL THROUGH THE PERMITTING PROCESS. WHENEVER THE WORK AFFECTS ADJACENT PROPERTIES, THE CONTRACTOR MUST INFORM THE PROPERTY OWNERS PRIOR TO BEGINNING THE WORK AND KEEP THEM APPRISED OF TIME SCHEDULES,
- DELAYS, IMPACTS, CHANGES IN PEDESTRIAN AND VEHICLE ACCESS OR TRAFFIC PATTERNS, AND FINAL RESTORATION PLANS. . WHEN ALL IMPROVEMENTS ARE COMPLETE, ALL DRAINAGE AND SANITARY SEWER LINES ARE FLUSHED AND CLEANED OF FOREIGN MATTER, AND ALL CURBS AND GUTTERS AND STREETS ARE CLEAN AND FREE
- OF DIRT AND DEBRIS, THE SUBDIVIDER OR DEVELOPER SHALL NOTIFY THE DEPARTMENT OF PUBLIC WORKS TO MAKE A FINAL INSPECTION. A REPRESENTATIVE OF THE CITY SHALL BE PRESENT AT THE CCTV INSPECTION OF THE UTILITY LINES, WASTE WATER AND STORM SEWER. THE SUBDIVIDER DEVELOPER MUST PROVIDE A DVD COPY OF THE CCTV INSPECTION OF ALL UTILITY LINES.
- . PRIVATE IMPROVEMENTS THAT CONNECT TO CITY IMPROVEMENTS MUST BE CONSTRUCTED TO VDOT STANDARDS AND SHALL BE INCLUDED IN THE FINAL INSPECTIONS MADE BY THE DEPARTMENT OF PUBLIC WORKS, CITY INSPECTION SHALL INCLUDE PIPE BEDDING, PIPE, DROP INLETS, BACKFILL, ETC. PRIVATE IMPROVEMENTS ARE NOT INSPECTED BY THE DEPARTMENT OF PUBLIC WORKS AND OTHER
- INSPECTION ARRANGEMENTS SHOULD BE MADE TO INSURE PROPER CONSTRUCTION OF THESE ITEMS. 38. VDOT STANDARD ST-1 STEPS SHALL BE USED FOR ALL STRUCTURES WITH A DEPTH OF 4'-0" OR GREATER.
- 39. ANY ON-SITE EXCAVATION TO BE USED IN EMBANKMENTS SHALL BE APPROVED BY THE DEPARTMENT OF PUBLIC WORKS. ALL OFF-SITE BORROW MATERIAL SHALL BE FROM BORROW PITS APPROVED BY THE DEPARTMENT OF PUBLIC WORKS. COMPACTION TESTING SHALL BE PERFORMED IN LAYERS BY THE CITY'S GEOTECHNICAL ENGINEER ACCORDING TO VDOT STANDARDS.

- 40. IN GENERAL, PLASTIC SOILS IN CUT SECTIONS WITH ABOVE OPTIMUM MOISTURE SHALL BE REMOVED AND REPLACED WITH SELECT FILL.
- 41. SUBDIVISION GENERAL CONTRACTOR SHALL GRADE LOTS AS SHOWN BY PROPOSED CONTOURS TO

CONTRACTOR SHALL SUBMIT FOR REVIEW, TO THE CONSULTANT, SHOP DRAWINGS ON ALL PRECAST AND

- PRECLUDE THE PUDDLING OF WATER. SUPPLEMENTAL SPECIFICATIONS: VDOT ROAD AND BRIDGE STANDARDS DATED 2008 AND REVISIONS: THE 42. CG-12'S MUST BE INSTALLED AT CURB RETURNS WHERE THERE ARE EXISTING OR PROPOSED SIDEWALKS. 43. ALL LABOR, MATERIAL AND EQUIPMENT TO BE FURNISHED BY THE CONTRACTOR UNLESS OTHERWISE
  - NOTED 44. THE LETTERS "W & S" SHALL BE ENGRAVED IN THE FACE OF CURB DIRECTLY OVER SEWER AND WATER
  - SERVICES
  - THE CONTRACTOR SHALL VISIT THE SITE AND BECOME FAMILIAR WITH THE PERMIT AND INSPECTION REQUIREMENTS OF THE VARIOUS GOVERNMENTAL AGENCIES PRIOR TO SUBMITTING A BID. THE CONTRACTOR SHALL OBTAIN ALL NECESSARY PERMITS PRIOR TO CONSTRUCTION, AND SCHEDULE

INSPECTION ACCORDING TO AGENCY INSTRUCTION.

- MANUFACTURED ITEMS TO USE ON THIS SITE. FAILURE TO OBTAIN APPROVAL BEFORE PURCHASE AND INSTALLATION MAY RESULT IN REMOVAL AND REPLACEMENT AT CONTRACTOR'S EXPENSE. CONSULTANT'S APPROVAL OF A SHOP DRAWING DOES NOT RELIEVE CONTRACTOR'S RESPONSIBILITY FOR PERFORMANCE OF THE ITEM.
- 48. CONTRACTOR SHALL COORDINATE AND SCHEDULE HIS ACTIVITIES. WHERE NECESSARY WITH OTHER CONTRACTOR'S AND UTILITY COMPANIES.
- 49. CONTRACTOR SHALL REVIEW SOIL REPORTS AND BORINGS PRIOR TO BIDDING THE PROJECT AND COMMENCING CONSTRUCTION. 50. ALL NECESSARY PERMITS AND APPROVALS FROM AGENCIES GOVERNING THE CONSTRUCTION OF THIS
- WORK SHALL BE SECURED PRIOR TO BEGINNING CONSTRUCTION. 51. CONTRACTOR IS RESPONSIBLE FOR REPAIRS OR DAMAGE TO ANY EXISTING IMPROVEMENTS DURING
- CONSTRUCTION, SUCH AS, BUT NOT LIMITED TO, DRAINAGE, UTILITIES, PAVEMENT, STRIPING, CURB, LANDSCAPING, ETC., REPAIRS SHALL BE EQUAL TO OR BETTER THAN EXISTING CONDITIONS. 52. ANY STREET SIGNS DISPLACED DURING CONSTRUCTION SHALL BE RETURNED TO THEIR ORIGINAL
- LOCATIONS. THE CONTRACTOR SHALL REPLACE IN KIND ANY SIGNS DAMAGED DURING CONSTRUCTION AT THE CONTRACTOR'S EXPENSE. 53. CONTRACTOR SHALL MATCH EXISTING PAVEMENT IN GRADE AND ALIGNMENT WHERE SHOWN ON THE
- GRADING PLAN. 54. CONSTRUCTION SHALL COMPLY WITH ALL GOVERNING CODES AND IMPROVEMENTS SHALL BE CONSTRUCTED TO THE SAME
- 55. ALL WORK SHOWN SHALL BE DONE IN ACCORDANCE WITH THE PLANS AND SPECIFICATIONS PRIOR TO FINAL APPROVAL, THE AS-BUILT PLANS NEEDS TO BE SUBMITTED. AS-BUILTS SHALL BE PROVIDED AS ONE PAPER COPY AND ONE CD/DVD CONTAINING ONE PDF ALONG WITH THE AUTOCAD LAYERS THAT HAVE BEEN MODIFIED. THIS INFORMATION MUST BE SUBMITTED TO THE DEPARTMENT OF

#### TRAFFIC NOTES:

PUBLIC WORKS.

- TRAFFIC CONTROL SUPERVISOR, CERTIFIED BY ATSSA (AMERICAN TRAFFIC SAFETY SERVICES ASSOCIATION) SHALL BE ON SITE ANY TIME WORK IS BEING COMPLETED WITHIN THE CITY RIGHT OF WAY. 24-HOUR/DAY. 7-DAY/WEEK CONTACT INFORMATION FOR THE CONTRACTOR STAFF SHALL BE PROVIDED TO TRAFFIC OPERATION'S REPRESENTATIVE, PRIOR TO COMMENCING CONSTRUCTION ON-SITE.
- WHENEVER CONSTRUCTION IS IN OR ADJACENT TO CITY STREETS, THE CONTRACTOR SHALL FURNISH SIGNS, DRUMS, AND TRAFFIC CONTROL DEVICES AS DIRECTED BY THE THE DEPARTMENT OF PUBLIC WORKS. ALL SIGNS AND TRAFFIC CONTROL DEVICES SHALL CONFORM TO THE CURRENT MANUAL ON 12. THE GENERAL CONTRACTOR IS RESPONSIBLE FOR ANY AND ALL EXPENSES THAT RESULT FROM DELAYED UNIFORM TRAFFIC CONTROL DEVICES AS PUBLISHED BY THE U.S. DEPARTMENT OF TRANSPORTATION, FEDERAL HIGHWAY ADMINISTRATION, THE VIRGINIA SUPPLEMENT TO THAT MANUAL, AND VIRGINIA WORK AREA PROTECTION MANUAL
- EXISTING PAVEMENT MARKINGS WITHIN CITY RIGHT OF WAY ARE TO BE ERADICATED (ALL ERADICATION SCARS SHALL BE OVERLAID WITH SURFACE MIX OR SLURRY SEAL #4). ALL NEW STRIPING REQUIRES THE USE OF THERMOPLASTIC PAVEMENT MARKINGS TYPE B, CLASS I. CONTACT THE CITY TRAFFIC OPERATIONS OFFICE AT (804) 520-9371 TEN DAYS PRIOR TO PROCEEDING WITH STRIPING LAYOUT ALL JUNCTION BOXES SHALL BE STANDARD JB-R1 OR R2 UNLESS OTHERWISE NOTED.
- ALL CONDUITS UNDER PAVEMENT SHALL BE BORED AT A MINIMUM DEPTH OF 24". ALL OTHER CONDUIT SHALL BE INSTALLED IN ACCORDANCE WITH STANDARD ECI-1 AT A MINIMUM DEPTH OF 18".

#### ANDSCAPE PLAN STANDARD NOTES:

- PLANT MATERIAL SIZES AND GRADING ARE TO COMPLY WITH THE LATEST EDITION OF AMERICAN STANDARDS FOR NURSERY STOCK, PUBLISHED BY THE AMERICAN NURSERY AND LANDSCAPE ASSOCIATION.
- NO CHANGES TO LANDSCAPE DESIGN OR PLANT MATERIAL SCHEDULE UNLESS FIRST APPROVED BY COLONIAL HEIGHTS DIRECTOR OF PLANNING AND COMMUNITY DEVELOPMENT
- 3. LANDSCAPING WILL BE INSTALLED AND MAINTAINED SO AS NOT TO INTERFERE WITH SIGHT DISTANCE NEEDS OF DRIVES IN THE PARKING AREA AND AT THE ENTRANCE/EXIT LOCATIONS. 4. PLANT MATERIAL QUANTITIES AND SIZES WILL BE INSPECTED FOR COMPLIANCE WITH APPROVED PLANS
- BY A SITE PLAN REVIEW AGENT OF THE CITY OF COLONIAL HEIGHTS PRIOR TO THE RELEASE OF THE CERTIFICATE OF OCCUPANCY 5. THE CONTRACTOR IS RESPONSIBLE FOR MAINTAINING OR REPLACING SHRUBS AND TREES THAT ARE
- EXISTING. DYING OR DEAD PLANT MATERIALS ARE TO BE REPLACED DURING THE NEXT PLANTING SEASON. A 1 YEAR MAINTENANCE BOND FOR LANDSCAPING WILL BE REQUIRED

THE TRUNK (INCLUDING BIODEGRADABLE ROPE).

OWNER AND NOTED ON THE ENGINEERING PLANS.

CONTRACTORS EXPENSE

- THE CONTRACTOR SHALL PROVIDE ALL REQUIRED COORDINATION WITH RESPECTIVE UTILITY COMPANIES PRIOR TO THE DISCONNECTION, REMOVAL AND/OR RELOCATION OR DISCONNECTION OF UTILITIES.
- THE CONTRACTOR IS RESPONSIBLE FOR NOTIFYING ALL UTILITY PROVIDERS (INCLUDING, BUT NOT LIMITED TO ELECTRIC. FIBER. TELEPHONE. NATURAL GAS & CABLE TV) OF THE WORK PROPOSED. TO SHARE WORK SCHEDULES. MEANS. METHODS AND OTHER INFORMATION NECESSARY TO DETERMINE WETHER ANY AND ALL UTILITIES REQUIRE REMOVAL AND/OR RELOCATION (I.E. POLES, UNDERGROUND PIPES AND CONDUITS, JUNCTION BOXES, METERS, ETC.). CONTRACTOR SHALL BE RESPONSIBLE FOR COORDINATING ALL SUCH UTILITY REMOVAL AND/OR RELOCATION AND INCORPORATING SAME IN THE WORK PLAN. THE CITY OF COLONIAL HEIGHTS WILL NOT BE RESPONSIBLE FOR ANY COSTS ASSOCIATED WITH THE CONTRACTOR'S FAILURE TO PROPERLY PROVIDE FOR THE REMOVAL AND/OR RELOCATION OF
- UTILITIES TO COMPLETE THE PROPOSED WORK. THE CONTRACTOR IS RESPONSIBLE FOR THE DEMOLITION AND REMOVAL (OR RELOCATION) OF ALL STRUCTURES, PADS, WALLS, FLUMES, WELLS, FOUNDATIONS, PARKING, DRIVES, DRAINAGE STRUCTURES, UTILITIES, ETC., SUCH THAT THE IMPROVEMENTS SHOWN ON THE CONSTRUCTION PLANS CAN BE CONSTRUCTED. ALL FACILITIES TO BE REMOVED SHALL BE UNDERCUT TO SUITABLE MATERIAL AND BROUGHT TO GRADE WITH SUITABLE, COMPACTED FILL MATERIAL PER THE SPECIFICATIONS AND THE OWNER'S GEOTECHNICAL ENGINEER. THE CONTRACTOR IS RESPONSIBLE FOR ALL PERMITS INVOLVED AND IS RESPONSIBLE FOR REMOVING AND DUMPING THE DEBRIS IN AN APPROVED, LAWFUL MANNER.
- 4. THE CONTRACTOR SHALL MAINTAIN ALL UTILITY SERVICES TO EXISTING ADJACENT HOMES AND BUSINESSES AT ALL TIMES. THE CONTRACTOR SHALL COORDINATE WITH THE RESIDENTS AND UTILITY COMPANY FOR THE RELOCATION AND/OR REMOVAL OR DISCONNECTION OF UTILITIES IF NECESSARY. SERVICE SHALL NOT BE INTERRUPTED WITHOUT APPROVAL FROM THE RESIDENT.
- CONTRACTOR IS RESPONSIBLE FOR ALL PERMITS REQUIRED TO CARRY OUT THE WORK AS SHOWN ON THE DEMOLITION PLAN. ALL AREAS WHERE PAVEMENT, STRUCTURE SLABS, FOUNDATIONS, UTILITIES, CONDUITS, AND/OR
- UTILITY STRUCTURES HAVE BEEN REMOVED SHALL BE BACKFILLED WITH SELECT BACKFILL MATERIAL. ALL SELECT BACKFILL MATERIAL SHALL BE PLACED AND COMPACTED PER THE REQUIREMENTS OF SPECIFICATIONS AND THE OWNERS GEOTECHNICAL ENGINEER WHERE NECESSARY, ALL EXISTING FENCES, SIGNS, GATES, LEAD WALKS, LANDSCAPING, PAVEMENT
- MARKINGS, AND LIGHT POLES LOCATED WITHIN THE PUBLIC RIGHT-OF-WAY SHALL BE DEMOLISHED AND REPLACED IN-KIND. CONTRACTOR IS RESPONSIBLE FOR WALKING SITE AND DETERMINING EXTENTS OF DEMOLITION WORK
- AND UTILITY RELOCATIONS REQUIRED PRIOR TO BID DATE EXISTING MANHOLES AND VALVE BOXES TO REMAIN IN PLACE SHALL BE ADJUSTED TO FINAL GRADES. PRIOR TO ANY WORK ONSITE, THE CONTRACTOR SHALL CONTACT THE ONE CALL SYSTEM. THE CONTRACTOR IS RESPONSIBLE FOR ALL UTILITY REMOVALS WHETHER LOCATED BY THE ONE CALL SYSTEM OR NOT. IT IS THE CONTRACTOR'S RESPONSIBILITY TO POT HOLE ANY UTILITIES TO DETERMINE EXACT SIZES AND DEPTHS IN ORDER TO AVOID CONFLICTS NOT PREVIOUSLY COORDINATED BY THE
- LIMITS OF PAVEMENT SHOWN TO BE REMOVED ARE APPROXIMATE AND FOR REFERENCE ONLY. CONTRACTOR SHALL FIELD VERIFY THE LIMITS OF PAVEMENT TO DETERMINE THE EXTENT OF THE EXISTING PAVEMENT TO BE REMOVED. 12. WITH THE CITY'S APPROVAL, EXISTING UTILITIES SHOWN TO BE REMOVED MAY BE ABANDONED AND
- GROUTED IN-PLACE IF NEEDED TO AVOID FRANCHISE UTILITY CONFLICTS. **GRADING NOTES:** IF CONTRACTOR DOES NOT ACCEPT EXISTING TOPOGRAPHY AS SHOWN ON THE PLANS, WITHOUT EXCEPTION, HE SHALL HAVE MADE, AT HIS EXPENSE, A TOPOGRAPHIC SURVEY BY A REGISTERED LAND
- SURVEYOR AND SUBMIT IT TO THE OWNER FOR REVIEW AND APPROVAL IN WRITING THE CONTRACTOR IS RESPONSIBLE FOR THE PROTECTION OF ALL AREAS AND ITEMS INDICATED TO REMAIN UNDISTURBED OR TO REMAIN. ALL PROPERTY CORNERS AND ALL PINS ELIMINATED OR DAMAGED DURING CONSTRUCTION SHALL BE REPLACED BY A LICENSED PROFESSIONAL AT THE
- PROPOSED SPOT ELEVATIONS REPRESENT FINISHED PAVEMENT OR GROUND SURFACE GRADE UNLESS OTHERWISE NOTED ON DRAWINGS. CONTRACTOR SHALL TRIM, TACK, AND MATCH EXISTING PAVEMENT AT LOCATIONS WHERE NEW
- PAVEMENT MEETS EXISTING PAVEMENT. 5. ALL CONSTRUCTION STAKING SHALL BE HANDLED BY A LICENSED LAND SURVEYOR APPROVED BY THE
- 6. ALL GRADING IN LANDSCAPE AREAS SHALL ALLOW FOR POSITIVE DRAINAGE AWAY FROM BUILDINGS

- THE RESULTING FINISHED GRADE WITH INSTALLED LANDSCAPING AND MULCH SHALL NOT PREVENT OR OBSTRUCT POSITIVE DRAINAGE.
- ALL CUT OR FILL SLOPES SHALL BE 3:1 OR FLATTER UNLESS OTHERWISE NOTED. EXISTING SANITARY AND DRAINAGE STRUCTURES TO BE INSPECTED AND REPAIRED AS NEEDED, AND EXISTING PIPES TO BE CLEANED OUT TO REMOVE ALL SILTS AND DEBRIS.
- 9. IF ANY EXISTING STRUCTURES TO REMAIN ARE DAMAGED DURING CONSTRUCTION, IT SHALL BE THE CONTRACTORS RESPONSIBILITY TO REPAIR AND/OR REPLACE THE EXISTING STRUCTURE AS NECESSARY TO RETURN IT TO EXISTING CONDITIONS OR BETTER.
- 10. ALL STORM PIPE ENTERING STRUCTURES SHALL BE GROUTED TO ASSURE CONNECTION AT STRUCTURE IS

- 1 CONTRACTOR IS RESPONSIBLE FOR VERIFYING SIZE TYPE DEPTH AND HORIZONTAL LOCATION OF ALL LITILITIES AND NOTIFYING THE APPROPRIATE LITILITY COMPANY PRIOR TO REGINNING CONSTRUCTION
- THE CONTRACTOR IS SPECIFICALLY CAUTIONED THAT THE LOCATION AND/OR ELEVATION OF EXISTING UTILITIES AS SHOWN ON THESE PLANS IS BASED ON RECORDS OF THE VARIOUS UTILITY COMPANIES AND, WHERE POSSIBLE. MEASUREMENTS TAKEN IN THE FIELD. THE INFORMATION IS NOT TO BE RELIED ON AS BEING EXACT OR COMPLETE. THE CONTRACTOR SHALL FIELD VERIFY ALL EXISTING UTILITY LINE LOCATIONS PRIOR TO ANY CONSTRUCTION, ANY DEVIATIONS FROM THE DESIGN LOCATIONS SHALL BE REPORTED TO THE OWNER AND ENGINEER PRIOR TO CONSTRUCTION. IT IS THE CONTRACTOR'S RESPONSIBILITY TO POT HOLE ANY UTILITIES TO DETERMINE EXACT SIZES AND DEPTHS IN ORDER TO AVOID CONFLICTS NOT PREVIOUSLY COORDINATED BY THE OWNER AND NOTED ON THE ENGINEERING PLANS. THE CONTRACTOR MUST CALL THE APPROPRIATE UTILITY COMPANY AT LEAST 48 HOURS BEFORE ANY EXCAVATION TO REQUEST EXACT FIELD LOCATION OF THE UTILITIES.
- CONTRACTOR SHALL VERIFY HORIZONTAL AND VERTICAL LOCATION OF ALL EXISTING SANITARY AND STORM SEWER STRUCTURES, PIPES, AND ALL UTILITIES PRIOR TO CONSTRUCTION. CONTRACTOR IS RESPONSIBLE FOR REPAIRS OF DAMAGE TO ANY EXISTING IMPROVEMENTS DURING CONSTRUCTION, SUCH AS, BUT NOT LIMITED TO, UTILITIES, PAVEMENT, STRIPING, CURBS, LANDSCAPING,
- ETC. REPAIRS SHALL BE EQUAL TO OR BETTER THAN EXISTING CONDITIONS. CONTRACTOR SHALL COORDINATE INSTALLATION OF UTILITIES IN SUCH A MANNER AS TO AVOID CONFLICTS AND ASSURE PROPER DEPTHS ARE ACHIEVED AS WELL AS COORDINATING WITH MUNICIPAL UTILITY REQUIREMENTS AS TO LOCATIONS AND SCHEDULING FOR TIE-INS/CONNECTIONS PRIOR TO CONNECTING EXISTING FACILITIES.
- SEE DETAIL SHEETS FOR BACKFILLING AND COMPACTION REQUIREMENTS ON UTILITY TRENCHES.
- CONTRACTOR SHALL COMPLY TO THE FULLEST EXTENT WITH THE LATEST STANDARD OF O.S.H.A. DIRECTIVES OR ANY OTHER AGENCY HAVING JURISDICTION FOR EXCAVATION AND TRENCHING PROCEDURES. THE CONTRACTOR SHALL USE SUPPORT SYSTEMS, SLOPING, BENCHING, AND OTHER MEANS OF PROTECTION. THIS TO INCLUDE BUT NOT LIMITED TO, ACCESS AND EGRESS FROM ALL EXCAVATION AND TRENCHING. CONTRACTOR IS RESPONSIBLE TO COMPLY WITH PERFORMANCE CRITERIA FOR O.S.H.A.
- CONTRACTOR SHALL MEET OR EXCEED HORIZONTAL VERTICAL SEPARATION AT PROPOSED UTILITY CROSSINGS SHOWN ON PLANS AND PROFILES
- 9. CONTRACTOR SHALL GROUT AROUND ALL PIPE ENTRANCES TO SANITARY SEWER MANHOLES WITH NON-SHRINKING GROUT TO ASSURE CONNECTION IS WATER TIGHT. 10. CONTRACTOR SHALL ON ALL UTILITIES. COORDINATE INSPECTION WITH THE ENGINEER AND ALL OTHER
- APPROPRIATE AUTHORITIES PRIOR TO COVERING TRENCHES AT INSTALLATION. 11. THE CONTRACTOR SHALL CONDUCT ALL REQUIRED TESTS TO THE SATISFACTION OF THE RESPECTIVE UTILITY COMPANIES AND OWNERS INSPECTING AUTHORITIES.
- OR FAILED TESTING DURING ANY PHASE OF THE CONSTRUCTION PROCESS. THIS INCLUDES FEES INCURRED THROUGH RESCHEDULING OF ANY UTILITY PROVIDERS, VENDORS OR EQUIPMENT TO ACCOMMODATE. . THE CONTRACTOR SHALL NOTIFY THE CITY AT LEAST SEVEN DAYS PRIOR TO ANY SERVICE DISRUPTIONS
- TO ALLOW TIME TO NOTIFY AND COORDINATE WITH THE AFFECTED RESIDENTS AND BUSINESSES. MANY SERVICE CONNECTIONS WILL BE DISRUPTED SO SPECIAL CONSIDERATIONS SHOULD BE GIVEN TO IMPACTS TO LOCAL RESIDENTS WHEN SCHEDULING CONSTRUCTION OPERATIONS.
- 14. FRANCHISE UTILITY RELOCATED BY OTHERS, CONTRACTOR TO COORDINATE CONSTRUCTION ACTIVITIES WITH UTILITY COS
- 15. ALL STORM SEWER MANHOLES IN PAVED AREAS SHALL BE FLUSH WITH PAVEMENT, AND SHALL HAVE TRAFFIC BEARING RING AND COVERS.

#### WATER MAIN NOTES

WATER MAINS

- ALL WORK SHALL BE DONE IN ACCORDANCE WITH THE CITY OF COLONIAL HEIGHTS STANDARD DETAILS AND REQUIREMENTS. ALL VERTICAL AND HORIZONTAL BENDS ON WATER MAIN PIPE SHALL BE LIMITED PER THE
- MANUFACTURER AS WELL AS COLONIAL HEIGHTS STANDARD DETAIL WAT-11. ALL WATER MAIN SHUT DOWNS AND THE OPERATION OF VALVES SHALL BE COORDINATED WITH THE CITY OF COLONIAL HEIGHTS. THE CONTRACTOR SHALL SUBMIT FOR APPROVAL A PLAN THAT INCLUDES ALL SCHEDULED WATER MAIN SHUT DOWNS, PRESSURE TESTING AND CHLORINATION OF NEW WATER MAINS, ABANDONMENT OF EXISTING WATER MAINS, SERVICE TRANSFERS, AND THE PHASING IN OF NEW
- JOINT RESTRAINTS SHALL BE PROVIDED AT ALL BENDS, TEES, AND FIRE HYDRANTS AS SPECIFIED ON SHEET 6. THE MINIMUM COVER OVER WATER MAINS SHALL BE 3.5 FEET
- EXISTING WATER METER SERVICE BOX ASSEMBLIES SHALL BE REPLACED BY THE CONTRACTOR IF DISTURBED DURING CONSTRUCTION ACTIVITIES. THE CONTRACTOR SHALL COORDINATE NEW SERVICE METER INSTALLATIONS WITH THE CITY OF COLONIAL HEIGHTS.
- AFTER NEW WATER MAINS ARE APPROVED AND ALL WATER SERVICES HAVE BEEN TRANSFERRED, THE CONTRACTOR SHALL REMOVE EXISTING WATER MAINS AND BACKFILL THE TRENCH AS NECESSARY REMOVAL SHALL INCLUDE ALL VALVES AND OTHER APPURTENANCES, WHICH SHALL BE BECOME PROPERTY OF THE CONTRACTOR UPON REMOVAL.

#### SANITARY SEWER NOTES

- ALL WORK SHALL BE DONE IN ACCORDANCE WITH THE CITY OF COLONIAL HEIGHTS. ALL STUB-OUTS AND WYE LATERALS SHALL BE PLUGGED WITH A STANDARD TYPE PLUG.
- SANITARY SEWER PIPE OF DIFFERENT MATERIAL SHALL BE JOINED BY A RUBBER SLEEVE WITH STAINLESS STEEL COUPLING, MADE FOR TRANSITIONS FROM ONE MATERIAL TO ANOTHER. THE SANITARY SEWER PIPE MATERIAL SHALL BE PVC, SDR 35, SEWER PIPE UNLESS OTHERWISE NOTED ON
- PLAN OR SPECIAL PROVISIONS. ALL SANITARY SEWER COVERS SHALL BE TRAFFIC RATED FOR H-20 LOADING.

- ROADWAY PAVEMENT AREAS SHALL BE ASPHALTIC CONCRETE. DETAILS OF THE STANDARD ASPHALTIC CONCRETE PAVEMENT ARE PROVIDED ON DETAIL SHEETS.
- NOTIFY OWNER 3 DAYS PRIOR TO ANY PROPOSED PAVING. TESTING OF MATERIALS REQUIRED FOR THE CONSTRUCTION OF THE PAVING IMPROVEMENTS SHALL BE PERFORMED BY AN AGENCY, APPROVED BY THE OWNER, FOR TESTING MATERIALS. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO ENSURE, BY THE STANDARD TESTING PROCEDURES, THAT THE WORK CONSTRUCTED MEETS THE REQUIREMENTS OF THE PROJECT SPECIFICATIONS
- CONTRACTOR SHALL SURVEY THE PROJECT SITE PRIOR TO BEGINNING CONSTRUCTION AND DOCUMENT THE EXISTING PAVEMENT MARKINGS. CONTRACTOR SHALL FURNISH AND INSTALL ALL PAVEMENT MARKINGS AT THE LOCATIONS EXISTING PRIOR TO CONSTRUCTION.
- ALL HANDICAP RAMPING, STRIPING, AND PAVEMENT MARKINGS SHALL CONFORM TO THE AMERICANS WITH DISABILITIES ACT, LATEST EDITION. ALL DISCREPANCIES FOUND BY CONTRACTOR RELATED TO UNDERGROUND UTILITIES OR OTHER
- APPURTENANCES SHALL BE RESOLVED TO THE SATISFACTION OF OWNER AND ENGINEER PRIOR TO PLACEMENT OF ANY PAVING. CONTRACTOR TO ENSURE POSITIVE DRAINAGE AND NO PONDING IN SUBGRADE OF AREAS TO BE PAVED, AND NOTIFY OWNER AND ENGINEER IF ANY DISCREPANCIES ARE FOUND PRIOR TO INSTALLATION OF ANY PAVING. EXISTING MANHOLE TOPS, VALVE BOXES, ETC. ARE TO BE ADJUSTED AS REQUIRED TO MATCH PROPOSED
- GRADES; ALL OTHERS WILL BE REJECTED. IF NECESSARY, RE-ADJUSTMENTS SHALL BE PERFORMED UPON COMPLETION OF PAVING, FINE GRADING, AND LANDSCAPING TO ENSURE A SMOOTH TRANSITION. COMPACTION SHALL BE DONE IN ACCORDANCE WITH THE RECOMMENDATIONS OF THE CITY'S
- SPECIFICATIONS ALL PAVEMENT TO BE SLOPED FOR POSITIVE DRAINAGE; ALL OTHERS WILL BE REJECTED.

CLARIFICATION REGARDING THESE PLANS SHALL BE REQUESTED IN WRITING TO THE CONSULTANT AT LEAST THREE (3) DAYS PRIOR TO NEEDING THE CLARIFICATION SO AS NOT TO DELAY THE PROJECT AS A RESULT OF THE REQUEST. THE REQUEST IS DEEMED SUBMITTED ONLY WHEN ACKNOWLEDGED BY THE CONSULTANT TO THE CONTRACTOR. IT IS THE CONTRACTOR'S RESPONSIBILITY TO ACTIVELY SOLICIT AN ACKNOWLEDGEMENT OF THE REQUEST FOR INFORMATION FROM THE CONSULTANT. THE CONTRACTOR SHALL NOT PROCEED WITH ANY WORK OR MATERIAL PURCHASES SUBJECT TO THE REQUEST FOR INFORMATION WITHOUT HAVING RECEIVED A RESPONSE FROM THE CONSULTANT.

#### SITE AND UTILITIES LEGEND **EXISTING DESCRIPTION PROPOSED** INDEX CONTOUR INTERMEDIATE CONTOUR EDGE OF PAVEMENT CURB AND GUTTER PROPOSED HEADER CURB PROPERTY LINE DEPARTING PROPERTY LIN RIGHT-OF-WAY CENTERLINE FLOOD PLAIN CLEARING AND GRADING TREE LINE FLOW LINE OF SWALE OVERLAND RELIEF PATHWAY FENCE LINE EASEMENT WATER LINE WATER VALVE REDUCER SANITARY SEWER STORM SEWER EX 18" ELECTRIC SERVICE TELEPHONE SERVICE GAS LINE SPOT ELEVATION + 25.32 UTILITY POLE 00 0 SANITARY SEWER IDENTIFIER STORM DRAIN IDENTIFIER EASEMENT IDENTIFIER WATER METER FIRE HYDRANT PARKING INDICATOR INDICATES THE NUMBER OF TYPICAL PARKING SPACES VEHICLES PER DAY 255 VPD) (TRAFFIC COUNT) TEST PIT LOCATION RECOMMENDED/REQUIRED CRITICAL SLOPE SLOPES TO BE STABILIZED PURSUANT TO VIRGINIA EROSION AND SEDIMENT CONTROL HANDBOOK DENOTES CLEAR SIGHT TRIANGLES BENCHMARK CONCRETE SIDEWALK STREET SIGN OVERHEAD ELECTRIC OVERHEAD TELEPHONE HANDICAP PARKING SPACE (VAN)

## CONTRACTOR TO INDEPENDENTLY VERIFY)

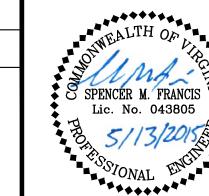
COLUMBIA GAS OF VIRGINIA 1809 COYOTE DRIVE CHESTER, VA. 23836 CONTACT: PHILIP COLEMAN PHONE: (804) 768-6439 FAX: (804) 768-6455 EMAIL: pcoleman@nisource.com

POWER: DOMINION VIRGINIA POWER 1340 EAST WASHINGTON STREET PETERSBURG, VA. 23803 CONTACT: HAROLD THURSTON PHONE: (804) 862-6024 FAX: (804) 862-6025

EMAIL: harold.a.thurston@dom.com

PHONE: VERIZON VIRGINIA 2600 BRITTONS HILL ROAD RICHMOND, VA. 23230 CONTACT: LARRY MOUNCE PHONE: (804) 772-4298

> PHONE: (804) 915-5259 FAX: (804) 915-5418



Bowman Consulting Group, Ltd. 3951 Westerre Parkway Suite 150 Richmond, Virginia 23233 Phone: (804) 616-3240 Fax: (804) 270-2008 SUBMITTAL DATE 05/13/2015

DATE REVISION PROGRESS SET BID SET FINAL BID SET

DESIGNEI DF. JW. M CHECKEI

CABLE: COMCAST 5401 STAPLES MILL ROAD RICHMOND, VA. 23228 CONTACT: WILL MORRIS

SHEET NO. 2 OF 31

## ROADWAY

	1	Г
Mobilization	1.0	LS
Construction Surveying	1.0	LS
Clearing & Grubbing	1.0	LS
Asph. Conc. 2" Mill and Overlay	310.0	SY
Asph. Conc. TY. SM-9.5D	340.0	TON
Asph. Conc. TY. BM-25.0A	585.0	TON
Asphalt Tack	405.7	GAL
Aggr. Base TY. 1, No 21B	1,780.0	TON
Std. Comb. Curb & Gutter CG-6	2,800.0	LF
Rad. Comb. Curb & Gutter CG-6	85.0	LF
Entr. Gutter CG-9D - modified	130.0	SY
Hydr. Cem. Conc. Sidewalk 4"	45.0	SY
6" Concrete Driveway Replacement	455.0	SY
Removal of Sidewalk and Entrance	500.0	SY
Removal of Comb. Curb & Gutter	3,015.0	LF
Demolition of Pavement (Combination)	4,258.8	SY
Topsoil, 2" depth	0.3	ACRE
Seed	65.0	LBS.
10-10-10 Fertilizer	0.2	TON
Lime	0.6	TON
Inlet Protection	13	EA
Culvert Inlet Protection	2	EA
Silt Fence	375	LF
Tree Removal	3	EA
Allaying Dust	100.0	HR
Class 1 Backfill	2,370	CY
Regular Excavation	3,950	CY

## MOT

Construction Signs	108	EA
Aggregate 21B	300	TON
Group 2 Channelizing Devices	80	DAY
Portable Changeable Message Sign	640	HR
Flagger Service	640	HR

## STORM DRAIN

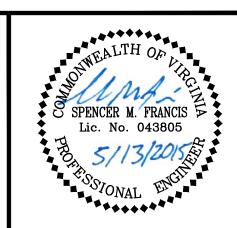
Remove Existing Storm Structures	13	EA
Remove Existing Strom Pipe & Backfill Trench	1,006	LF
Storm Sewer Pipe 12"	29	LF
Storm Sewer Pipe 15"	149	LF
Storm Sewer Pipe 18"	244	LF
Storm Sewer Pipe 24"	41	LF
Storm Sewer Pipe 30"	455	LF
Storm Sewer Pipe 36"	307	LF
Storm Sewer Pipe 42"	318	LF
Storm Sewer Pipe 49"x29"	36	LF
Storm Sewer Pipe 53"x34"	71	LF
Drop Inlet, DI-1	1	EA
Drop Inlet, DI-2A	2	EA
Drop Inlet, DI-2B	1	EA
Drop Inlet, DI-3C, L=6'	2	EA
Drop Inlet, DI-4A	1	EA
Drop Inlet, DI-4B, L=8'	1	EA
Drop Inlet, DI-4C, L=8'	3	EA
Drop Inlet, DI-7	1	EA
48" Manhole	6	LF
72" Manhole	14	LF
84" Manhole	9	LF
Junction Box, JB-1	1	EA
Standard Endwall for Pipe Culverts	0.8	CY
Flared End Section	1	EA
Manhole Frame and Cover	6	EA
Minor Structure Excavation	715	CY

## WATER

8" C-900 PVC Water Main	960	LF
6" C-900 PVC Water Main	40	LF
Adjust Water Main for Sewer Installation	1	LS
Maintain Water Service During Construction	1	LS
8" Gate Valve with Valve Box	5	EA
Meter Box and Setting	2	EA
Water Service Line (2" Dia. and Smaller)	470	LF
Remove Existing Water Line & Backfill Trench	950	LF
Remove Existing Fire Hydrant	1	EA
Remove and Replace Existing Fire Hydrant	1	EA
Fire Hydrant Assembly	3	EA

#### SANITARY SEWER

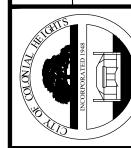
SANITARY SEVVER		
8" SDR-35 Sanitary Sewer	781	LF
8" DIP Sanitary Sewer	77	LF
Sanitary Sewer Cleanout	23	EA
Sanitary Sewer Lateral	575	LF
48" Manhole	37	LF
Manhole Frame and Cover	5	EA
Remove Existing Sanitary Sewer	781	LF
Manhole Reconstruction	1	EA
Remove Manhole	3	EA
Maintain Gravity Sewer Service During Construct	1	LS





Bowman Consulting Group, Ltd. 3951 Westerre Parkway Suite 150 Richmond, Virginia 23233 Phone: (804) 616-3240 Fax: (804) 270-2008

REVISION PROGRESS SET BID SET



SHEET NO. 3 OF 31

Alignment: Bruce Ave Description:

Start: 9+75.000 3614486.551 11799195.242 End: 11+50.000 3614613.263 11799315.945 Length: 175.000 Course: N 43° 36' 31.3781" E

Start: 11+50.000 3614613.263 11799315.945 End: 13+00.000 3614725.208 11799415.786 Length: 150.000 Course: N 41° 43' 44.6692" E

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Start: 13+00.000 3614725.208 11799415.786 End: 13+60.043 3614768.683 11799457.199 Length: 60.043 Course: N 43° 36' 31.3781" E

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PC: 13+60.043 3614768.683 11799457.199 RP: 3614650.049 11799581.739 PT: 14+70.540 3614819.649 11799553.105 Circular Curve Data Delta: 36° 48′ 30.0544″ Type: RIGHT Radius: 172.000 Length: 110.497 Tangent: 57.231 Mid-Ord: 8.797 External: 9.271

Chord: 108.607 Course: N 62° 00' 46.4053" E

Start: 14+70.540 3614819.649 11799553.105 End: 17+74.898 3614870.317 11799853.216 Length: 304.358 Course: N 80° 25' 01.4325" E

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Alignment: Battery Pl Description:

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Start: 00+50.880 3613252.276 11800253.780 End: 10+00.000 3614004.571 11799675.095 Length: 949.120 Course: N 37° 34' 06.4140" W

Start: 10+00.000 3614004.571 11799675.095 End: 13+58.996 3614289.600 11799456.837 Length: 358.996 Course: N 37° 26' 33.3341" W

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\_\_\_\_\_\_ Curve Point Data PC: 13+58.996 3614289.600 11799456.837 RP: 3614244.002 11799397.290 PT: 13+74.010 3614300.531 11799446.581 Circular Curve Data Delta: 11° 28' 12.9207" Type: LEFT

Radius: 75.000 Length: 15.015 Tangent: 7.532 Mid-Ord: 0.375 External: 0.377 Chord: 14.989 Course: N 43° 10' 39.7945" W

\_\_\_\_\_ Start: 13+74.010 3614300.531 11799446.581 End: 18+80.177 3614633.187 11799065.077 Length: 506.167 Course: N 48° 54' 46.2548" W

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Curve Point Data PC: 18+80.177 3614633.187 11799065.077 RP: 3614661.451 11799089.722 PT: 19+09.814 3614659.076 11799052.297 Circular Curve Data Delta: 45° 16′ 55.2794" Type: RIGHT Radius: 37.500 Length: 29.637 Tangent: 15.641 Mid-Ord: 2.890 External: 3.131 Chord: 28.872 Course: N 26° 16' 18.6151" W

Tangent Data

Start: 19+09.814 3614659.076 11799052.297 End: 23+47.076 3615095.460 11799024.607 Length: 437.261 Course: N 03° 37' 50.9754" W

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Alignment: Maple Ln

Start: 10+00.000 3614518.286 11797954.259 End: 21+60.853 3614591.578 11799112.796 Length: 1160.853 Course: N 86° 22' 48.6240" E

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## SURVEYOR'S NOTES

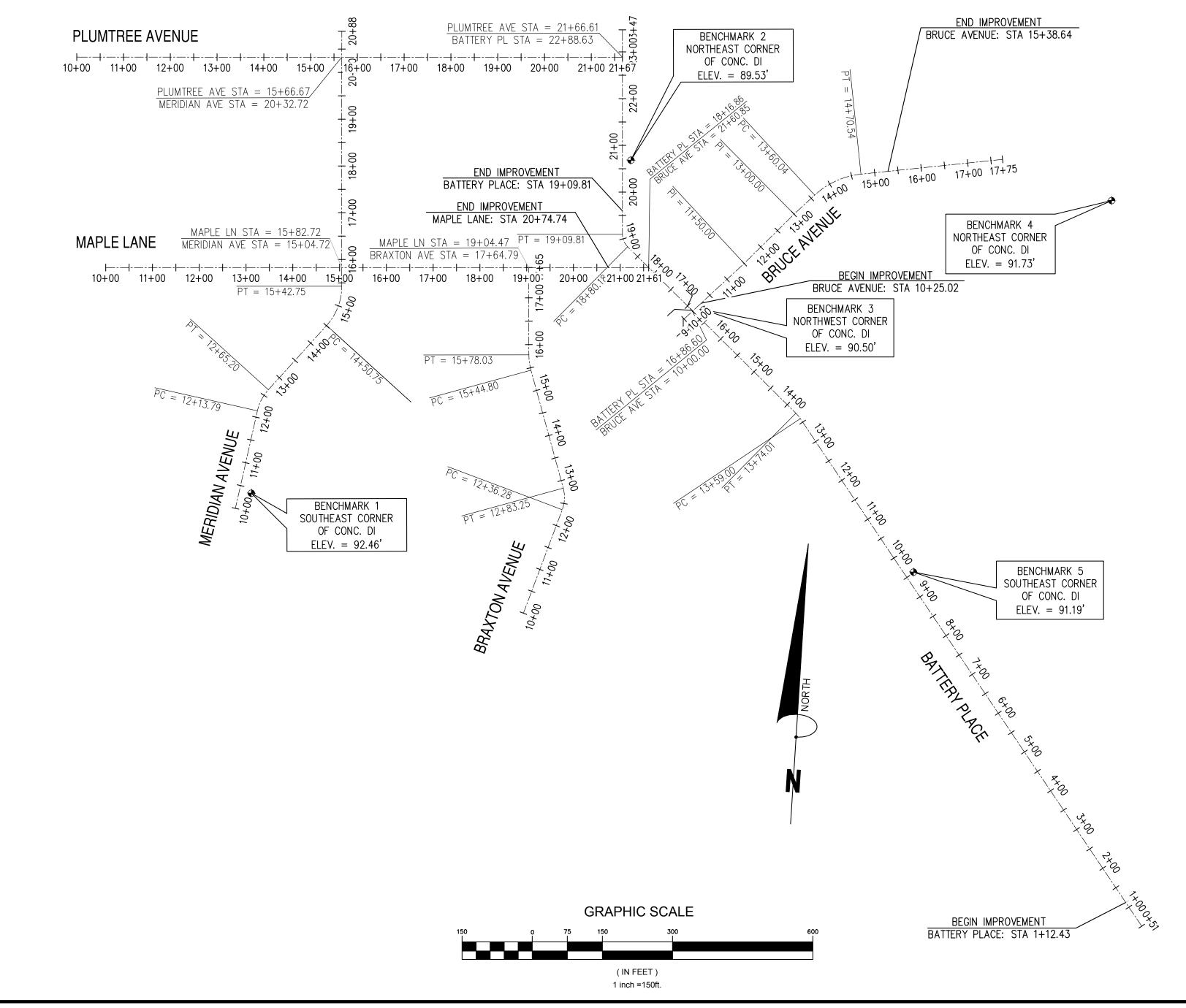
- NORTH MERIDIAN INFORMATION AS SHOWN HEREON IS BASED ON VIRGINIA STATE PLANE COORDINATE SYSTEM, SOUTH ZONE NAD 83. VERTICAL DATUM USED IS NAVD 88.
- 2. THIS SURVEY WAS PERFORMED WITHOUT THE BENEFIT OF A CURRENT TITLE REPORT AND NO PROPERTY OR EASEMENT RESEARCH WAS PROVIDED BY THE CITY.
- 4. THIS DOCUMENT IS AN EXHIBIT OR PARTIAL TOPOGRAPHIC SURVEY AND IS TO SUPPLEMENT A PREVIOUS TOPOGRAPHIC SURVEY OBTAINED BY THE CITY OF COLONIAL HEIGHTS FOR DRAINAGE IMPROVEMENTS. THIS SURVEY IS NOT INTENDED FOR RECORDING OR TO ASSIST IN THE CONVEYANCE OF PROPERTY. THIS DOES NOT REPRESENT A BOUNDARY SURVEY AND NOT ALL PROPERTY CORNERS WERE RECOVERED. MISSING CORNERS WILL NOT BE SET.
- PROPERTY AND OWNER INFORMATION SHOWN WAS SUPPLIED TO BOWMAN CONSULTING BY THE CITY OF COLONIAL HEIGHTS. BOWMAN CONSULTING DOES NOT GUARANTEE THE ACCURACY OF PROPERTY OR OWNER INFORMATION WITH RELATION TO RECORD INFORMATION.
- UNDERGROUND UTILITY INFORMATION SHOWN IS BASED ON PAINTED MARKS BY MISS UTILITY 05/09/14 AND LOCATED BY BOWMAN CONSULTING. THERE MAY BE OTHER UNDERGROUND UTILITIES PRESENT THAT ARE NOT SHOWN. BOWMAN CONSULTING GROUP DOES NOT GUARANTEE THE ACCURACY OF THE MARKED UTILITIES, OR THAT ALL UTILITIES WERE MARKED AT TIME OF SURVEY.

#### SURVEYOR'S CERTIFICATE

THIS TOPOGRAPHIC SURVEY WAS COMPLETED UNDER THE DIRECT AND RESPONSIBLE CHARGE OF, CRAIG S. MACAULAY FROM AN ACTUAL GROUND SURVEY MADE UNDER MY SUPERVISION; THAT THE IMAGERY AND/OR ORIGINAL DATA WAS OBTAINED ON MAY 13, 2014 AND THAT THIS PLAT, MAP, OR DIGITAL GEOSPATIAL DATA INCLUDING METADATA MEETS MINIMUM ACCURACY STANDARDS UNLESS OTHERWISE NOTED.

#### TEMPORARY BENCHMARKS

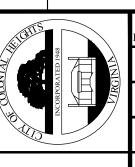
- 1. SOUTHEAST CORNER OF EXISTING CONCRETE DRAINAGE INLET, MERIDIAN AVE. 3,614,056.1843 N, 11,798,295.4842 E ELEV. = 92.46'
- 2. NORTHEAST CORNER OF EXISTING CONCRETE DRAINAGE INLET, BATTERY PLACE 3,614,818.3110 N, 11,799,060.3560 E ELEV. = 89.53'
- 3. NORTHWEST CORNER OF EXISTING CONCRETE DRAINAGE INLET, BATTERY / BRUCE 3,614,508.9960 N, 11,799,235.9700 E ELEV. = 90.50'
- 4. NORTHEAST CORNER OF EXISTING CONCRETE DRAINAGE INLET, BRUCE AVE. 3,614,797.1200 N, 11,800,091.5140 E ELEV. = 91.73°
- 5. SOUTHEAST CORNER OF EXISTING CONCRETE DRAINAGE INLET, BATTERY PLACE 3,613,977.2550 N, 11,799,719.0180 E ELEV. = 91.19'





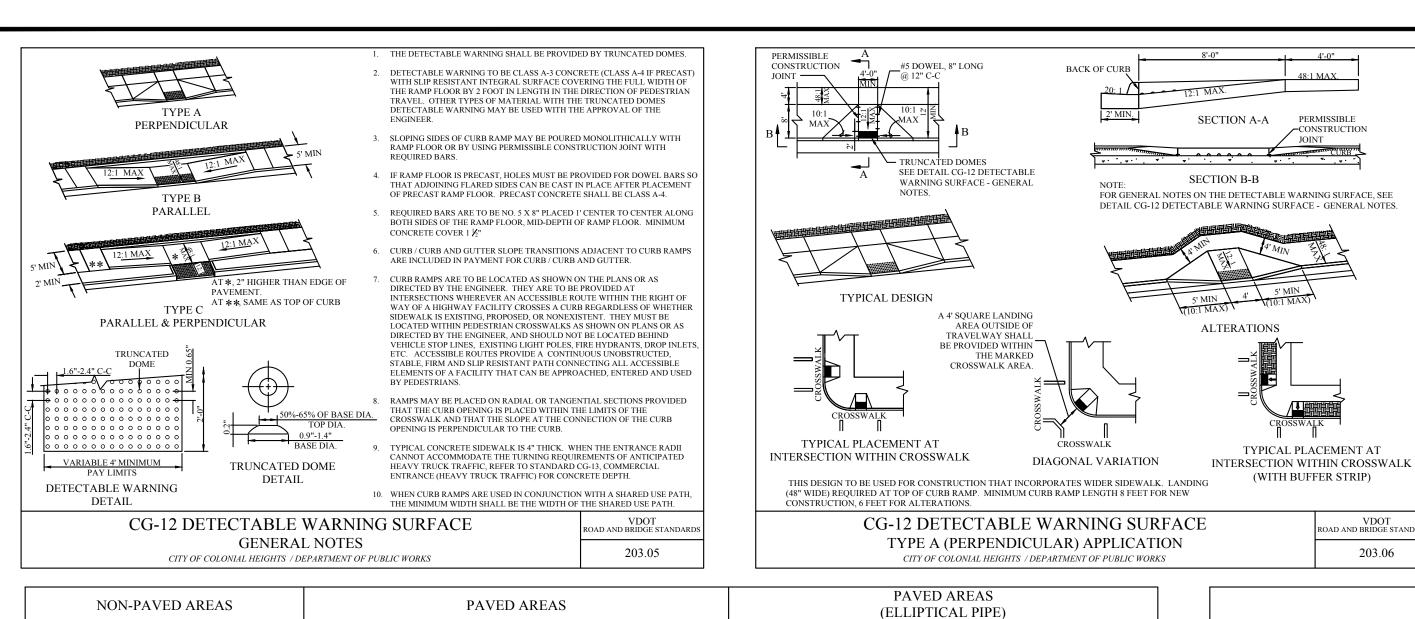
Bowman Consulting Group, Ltd. 3951 Westerre Parkway Suite 150 Richmond, Virginia 23233 Phone: (804) 616-3240 Fax: (804) 270-2008

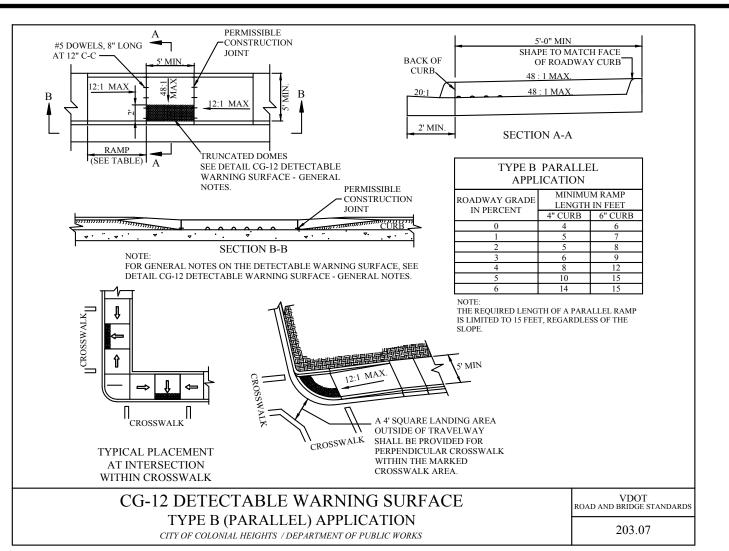
SUBMITTAL DATE DATE REVISION PROGRESS SET BID SET FINAL BID SET



DESIGNED DF, JW, MT CHECKED SF, JJ SCALE

SHEET NO. 4 OF 31





MODIFIED / DRY CURB AND GUTTER (NOT PERMITTED WITHIN THE CITY'S R/W

DRWG. NO.

CH-3

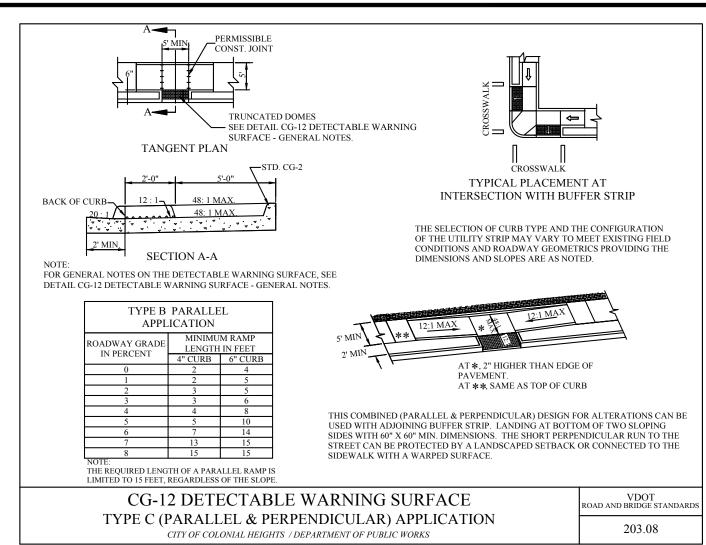
E BOTTOM OF THE CURB

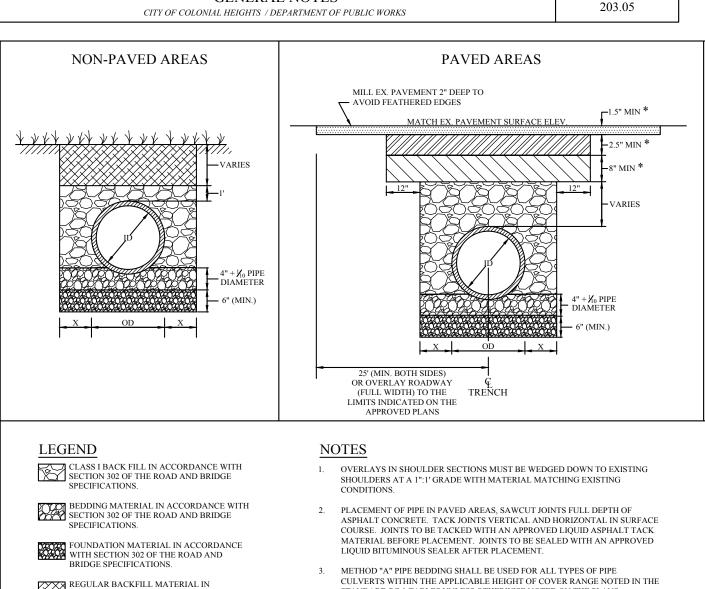
AND GUTTER MAY BE

TO THE SLOPE OF SUBBASE

MINIMUM DEPTH OF 7" IS

MAINTAINED.





ACCORDANCE WITH SECTION 302 OF THE

BM-25.0 (2.5" MIN.) OR MATCH EXISTING,

21B (8" MIN.) OR MATCH EXISTING,

WHICHEVER IS GREATER.

WHICHEVER IS GREATER.

WHICHEVER IS GREATER.

XISTING OR PROPOSE

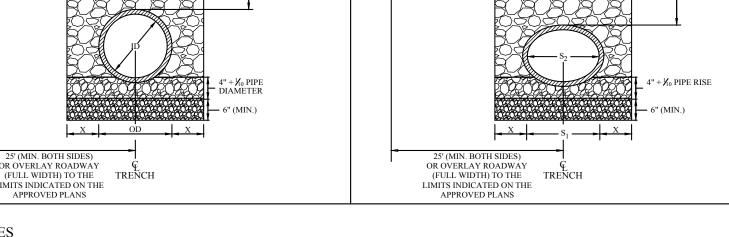
SIDEWALK OR SIDEWALK

- WIDTH OF GUTTER

-EXPANSION JOINT

EDGE OF PAVEMENT

SM-9.5A (1.5" MIN.) OR MATCH EXISTING



9. REGULAR BACKFILL MATERIAL MAY BE USED IN LIEU OF CLASS I BACKFILL MATERIAL FOR ALL FOUNDATION TYPES FOR ROUTINE ENTRANCE PIPE (EXCEPT PLASTIC PIPE) 30" AND LESS IN DIAMETER WITH

MILL EX. PAVEMENT 2" DEEP TO

MATCH EX. PAVEMENT SURFACE ELEV

AVOID FEATHERED EDGES

10. BEDDING MATERIAL AND CLASS I BACKFILL MATERIAL MAY BE ELIMINATED FOR SHOULDER SLOT INLET (DI-13) OUTLET PIPES INSTALLATIONS.

#### ELLIPTICAL PIPE S<sub>1</sub> = OUTSIDE SPAN OF PIPE

- $S_2$ = INSIDE SPAN OF PIPE.
- 3. X = WIDTH OF CLASS I BACKFILL MATERIAL BEYOND THE EXTREMITY OF X = 12" WHERE S IS LESS THAN 36" X = 18" WHERE S IS 36" AND GREATER.
- 4. WHERE DIRECTED BY THE CITY ENGINEER, BEDDING MATERIAL MAY BE ELIMINATED FOR NORMAL EARTH FOUNDATIONS UNDER ROUTINE ENTRANCE PIPE WHERE S 2 IS 38" OR LESS AND HEIGHT OF COVER 15' OR
- 5. REGULAR BACKFILL MATERIAL MAY BE USED IN LIEU OF CLASS I BACKFILL MATERIAL FOR ALL FOUNDATION TYPES FOR ROUTINE

CH-1

ISOMETRIC VIEW

ISOMETRIC VIEW

SECTION ELEVATION AT GUTTER LINE

MODIFICATIONS TO THIS DETAIL MAY BE REQUIRED FOR SIDEWALKS AND MOBILITY IMPAIRMENT REQUIREMENTS

THERE IS AN EXISTING SIDEWALK ADJACENT TO THE

THERE IS A CURB INLET WITHIN 25' OF THE ENTRANC

INSTALLED. IN LIEU OF REMOVING THE EXISTING CURB AND GUTTER BETWEEN JOINTS, THE EXISTING CURB AND GUTTER

MAY BE SAWCUT PROVIDED THAT THE REMAINING SECTION ARE 5' OR GREATER IN LENGTH

THE LOT ADJACENT TO THE DRIVE WAY IS LOWER THAN

C. THE LOT ADJACENT TO THE DRIVE WAY IS DOWER THAN
THE CURB.
WHEN A CURB CUT IS INSTALLED IN EXISTING CURB AND
GUTTER, THE EXISTING CURB AND GUTTER SHALL BE
COMPLETELY REMOVED (INCLUDING THE GUTTER PAN)
BETWEEN EXISTING JOINTS AND COMPLETE CURB CUT SECTION
BETWEEN EXISTING JOINTS AND COMPLETE CURB CUT SECTION
SUBGRADE

SIDEWALKS AND MOBILITY IMPAIRM CONCRETE SHALL BE CLASS A-3. CONCRETE APRONS ARE REQUIRED II

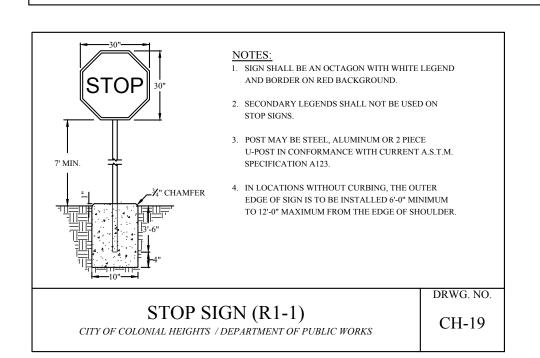
2.5' 12' MIN. WIDTH

(MIN) DEPTH

TO MATCH

DRIVEWAY ENTRANCE APRON

(WITH CURB AND GUTTER) CITY OF COLONIAL HEIGHTS / DEPARTMENT OF PUBLIC WORKS



ONSTRUCTION

TYPICAL PLACEMENT AT

(WITH BUFFER STRIP)

SUBGRADE

203.06

NOTES:

1. THIS ITEM MAY BE PRECAST OR CAST IN PLACE.

ENTRANCE A

½ WIDTH OF ENTRAN

2'-0" GUTTER

FLOW LINE

1/2" PREMOLDED

EXPANSION JOINT FILLER

MAIN ROADWAY

HALF - PLAN

SECTION A-A

SECTION B-B

SECTION C-C

CH-6

(IF REOUIRED)

2. CONCRETE TO BE CLASS A3 IF CAST IN PLACE, 4000 PSI IF PRECAST.

OF SUBBASE COURSES AND TO THE DEPTH OF THE PAVEMENT.

DESIGN MANUAL IN THE SECTION ON GS URBAN STANDARDS.

3 COMBINATION CURB & GUTTER HAVING A RADIUS OF 300 FEET OR LESS

4. FOR USE WITH STABILIZED OPEN-GRADED DRAINAGE LAYER, THE BOTTOM

5. ALLOWABLE CRITERIA FOR THE USE OF CG-6 IS BASED ON ROADWAY

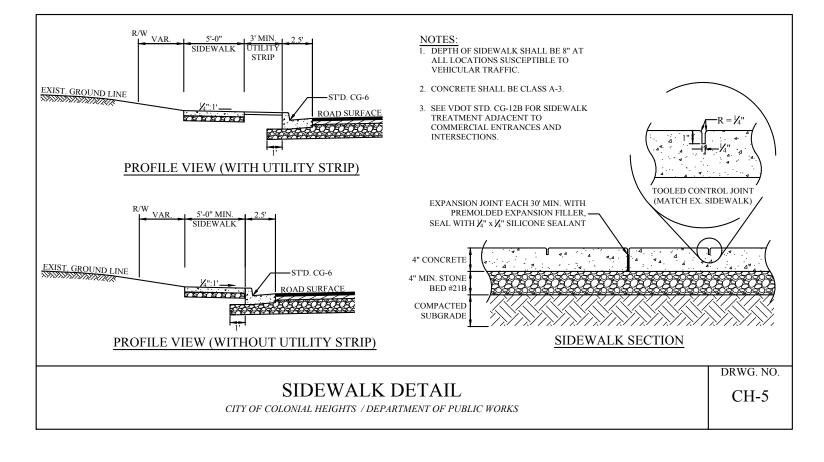
CLASSIFICATION AND DESIGN SPEED AS SHOWN IN APPENDIX A OF THE ROAD

STANDARD 6" CURB AND GUTTER

CITY OF COLONIAL HEIGHTS / DEPARTMENT OF PUBLIC WORKS

OF THE CURB & GUTTER SHALL BE CONSTRUCTED PARALLEL TO THE SLOPE

(ALONG FACE OF CURB) SHALL BE PAID FOR AS RADIAL COMBINATION CURB



- 1' 0" - - 6" -

RADIAL CURB.

NOTES:

1. THIS ITEM MAY BE PRECAST OR CAST IN PLACE.

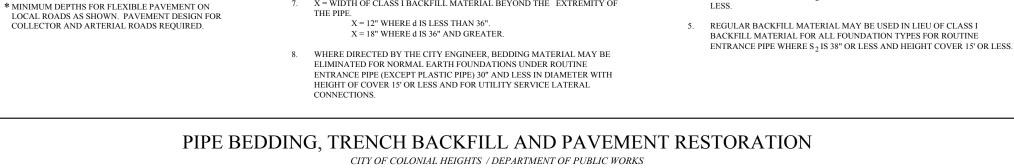
CONCRETE TO BE CLASS A3 IF CAST IN PLACE, 4000 PSI IF PRECAST

STANDARD 6" CURB

CG-2

CURB HAVING A RADIUS OF 300 FEET OR LESS (ALONG FACE OF CURB) WILL BE PAID FOR AS

THE DEPTH OF CURB MAY BE REDUCED AS MUCH AS 3" (15" DEPTH) OR INCREASED AS MUCH AS



PEDESTRIAN ACCESS ROUTE DETAIL

ADDITIONAL RIGHT-OF-WAY IS REQUIRED IF THE LIMITS F PEDESTRIAN ACCESS ROUTE 🔀 EXTEND BEYOND

DETAIL TO BE USED WHEN THE COMBINED WIDTH OF

NPAVED SPACE AND SIDEWALK SPACE IS LESS THAN 7'

SECTION B-B

SECTION C-C

SECTION D-D

EXISTING OR PROPOSED VDOT RIGHT OF WAY.

🗷 PEDESTRIAN ACCESS ROUTES PROVIDE A CONTINUOUS UNOBSTRUCTED, STABLE, FIRM AND

**★** IF PEDESTRIAN ACCESS ROUTES ■ RE BEING

REQUIRED WITH A MAX. 2% CROSS SLOPE.

WHERE COMMERCIAL DRIVEWAYS ARE PROVIDED

WITH YIELD OR STOP CONTROL, DETECTABLE WARNING SURFACES ARE TO BE PROVIDED AT THE

JUNCTION BETWEEN THE PEDESTRIAN ROUTE AND

CONFIGURATION

SLIP RESISTANT PATH CONNECTING ALL ACCESSIBLE ELEMENTS OF A FACILITY THAT CAN BE

APPROACHED, ENTERED AND USED BY PEDESTRIANS

PROVIDED, A MINIMUM 4' TRAVERSABLE WIDTH IS

WHEN USED IN CONJUNCTION WITH STANDARD CG-3 OR CG-7, THE CURB FACE ON THIS STANDARD IS TO

BE ADJUSTED TO MATCH THE MOUNTABLE CURB

A POINT OF GRADE CHANGE

\*\* 12% MAXIMUM INCREASE IN SLOPE AT MINIMUM 10' INTERVALS

\*\*\*3% MAXIMUM DECREASE IN SLOPE FOR FIRST 10' INTERVAL AND
MAXIMUM DECREASE FOR SUCCEEDING MINIMUM 10' INTERVALS

STANDARD PC-1 TABLES UNLESS OTHERWISE NOTED ON THE PLANS.

TRENCH BACKFILL DETAIL SIMILAR FOR RIGID PAVEMENT INCLUDING

7. X = WIDTH OF CLASS I BACKFILL MATERIAL BEYOND THE EXTREMITY OF

SIDEWALKS AND DRIVEWAYS

5. OD = OUTSIDE DIAMETER OF PIPE

6. ID = INSIDE DIAMETER OF PIPE.

CIRCULAR PIPE

ENTRANCE

NSTRUCTION JOIN

ENTRANCE WIDTH DESIRABLE MINIMUM 16

HALF PLAN

GUTTER PAN

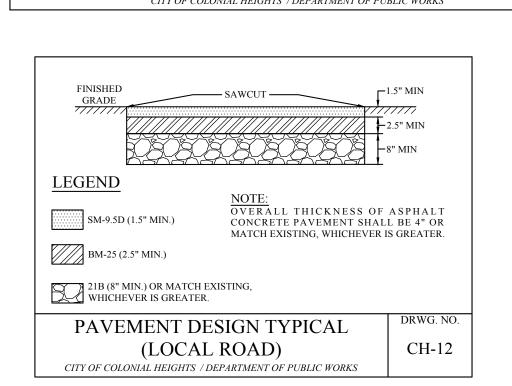
ENTRANCE WITH DETECTABLE WARNING SURFACE

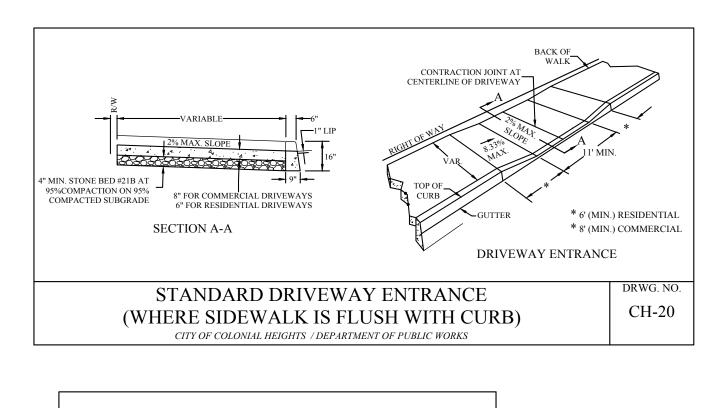
FOR SIDEWALK, CURB AND

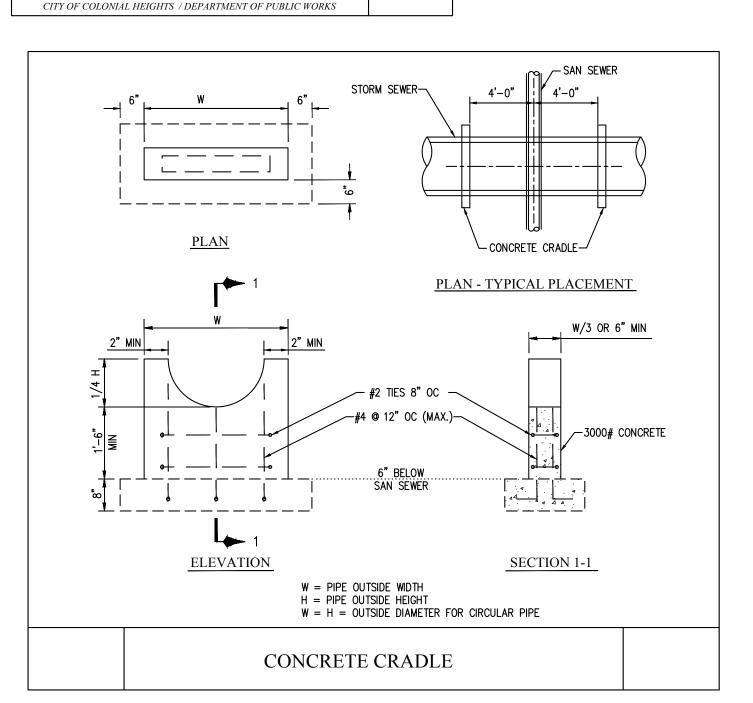
Α 🚤

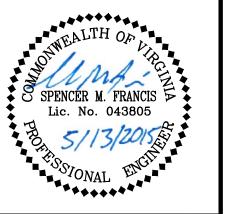
PROPOSED SIDEWALK OR SIDEWALK SPACE

DETECTABLE - WARNING SURFACE

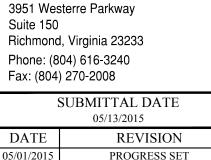




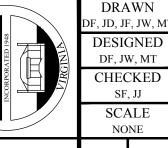


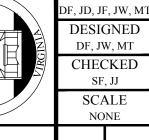






	05/13/201:	5
DATE	DATE REVISION	
05/01/2015	PROGRESS SET	
05/06/2015	BID SET	
05/13/2015	FINAL BID SET	
& JOHTS		DRAWN DF, JD, JF, JW, M
	05/01/2015 05/06/2015	DATE REV 05/01/2015 PROG 05/06/2015 BI





3" (21" DEPTH) IN ORDER THAT THE BOTTOM OF CURB WILL COINCIDE WITH THE TOP OF A COURSE OF THE PAVEMENT SUBSTRUCTURE. OTHERWISE, THE DEPTH IS TO BE 18" AS SHOWN. NO ADJUSTMENT IN THE PRICE BID IS TO BE MADE FOR A DECREASE OR AN INCREASE IN DEPTH. CG-2 IS TO BE USED ON ROADWAYS MEETING THE REQUIREMENTS FOR CG-6 AS SHOWN IN APPENDIX A OF THE VDOT ROAD DESIGN MANUAL, IN THE SECTION ON GS URBAN STANDARDS DRWG. NO.

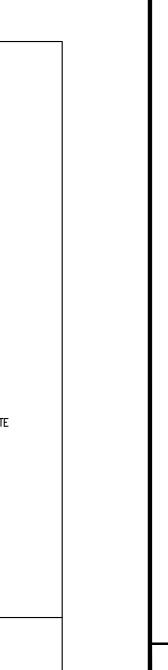
CH-2

ACCEPTABLE ALTERNATIVE

IF CURB IS EXTRUDED

SHEET NO.

5 OF 31



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STANDARD ENTRANCE GUTTER

CG-9D CITY OF COLONIAL HEIGHTS / DEPARTMENT OF PUBLIC WORKS